including endoleak, aneurysm sac growth, and any surgical or endovascular intervention. Thirteen patients who had no postoperative contrast-enhanced CT scans were excluded. Our practice has been to obtain CTA's at postoperative months 1, 6, and 12 and then yearly for 5 years.

**Results:** The mean patient follow up was 3.4 ± 2 years. Of 91 patients, 71 (78%) had a normal CTA at 1 month after EVAR without endoleak or other abnormality. Four of these 71 (5.6%) developed late complications consisting of three type II endoleaks and one type I endoleak, which presented on postoperative days 240, 1135, 1383, and 1294, respectively. Only one of the type II endoleaks was accompanied by aneurysm sac growth requiring repair and the small type I endoleak was also repaired.

**Conclusions:** For patients who have a normal CTA with no endoleak one month after EVAR it is reasonable to consider less frequent CTA surveillance as no significant complications requiring intervention occurred before three years.

**Author Disclosures: V. Kirkpatrick**: Nothing to disclose; **S. E. Wilson**: Nothing to disclose.

## RR4.

### Stent Graft Placement for Aneurysmal Degeneration After Long-Term Medical Therapy for Type B Aortic Dissection Results in Volumetric Gain of the True Lumen and False Lumen Regression

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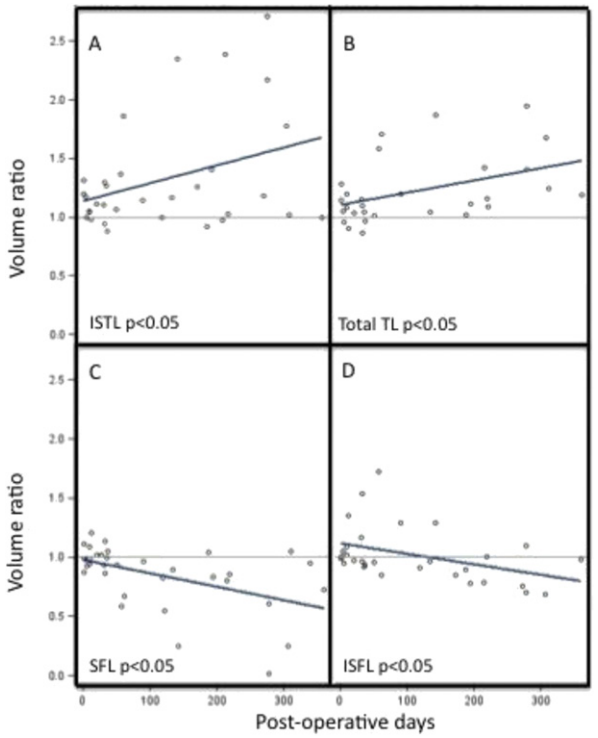


**Fig.**

**Objectives:** Despite optimal medical therapy of uncomplicated Type B aortic dissections (TBAD), true lumen narrowing and aneurysmal degeneration of the false lumen can occur over the long-term (>6 months). The efficacy of thoracic stent-grafts (TEVAR) for aortic remodeling when placed at late time points remains controversial. We studied post-TEVAR aortic volumetric changes in these patients.

**Methods:** Utilizing tomographic scans, volumes of multiple aortic compartments were calculated including the stented true lumen (STL), peri-stented false lumen (SFL), true lumen from distal stent to celiac axis (infra stent true lumen, ISTL), and the corresponding false lumen (ISFL). Cross-sectional areas were calculated at one centimeter intervals, collated, and volumetric ratios were derived from preoperative values.

**Results:** From 2004-2011, twenty-one patients met inclusion criteria. The time from index dissection to TEVAR was 197 days or greater. The left subclavian artery was covered in 71.4% of cases. Best-fit line statistical regression analysis of volumetric change demonstrated increases in ISTL and total TL volumes by 55% and 38%, respectively ($P < .05$) at one year (Fig, *A* and *B*). SFL and ISFL volumes decreased by 41% and 32%, respectively ($P < .05$) (Fig, *C* and *D*).

**Conclusions:** TEVAR for aneurysmal degeneration after long-term medical therapy of TBAD results in volumetric gain of the true lumen and false lumen regression.

**Author Disclosures: L. P. Brewster**: Nothing to disclose; **E. P. Chen**: Nothing to disclose; **Y. Duwayri**: Nothing to disclose; **B. G. Leshnower**: Nothing to disclose; **J. G. Reeves**: Nothing to disclose; **P. Reisenman**: Nothing to disclose; **J. Ruddy**: Nothing to disclose; **R. K. Veeraswamy**: Nothing to disclose.

## RR5.

### Aneurysm Sac Enlargement Independently Predicts Late Mortality in Patients Treated With EVAR

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**Objectives:** Patients undergoing EVAR of AAA can exhibit variations in sac behavior from complete regression to expansion. We evaluated the impact of sac behavior at one year follow up on late survival.

**Methods:** We used the Vascular Study Group of New England (VSGNE) registry (2003-2011), to identify EVAR patients with one year CT follow up. Aneurysm sac enlargement >5 mm (SacEn) or decrease >5 mm (SacDe) was defined according to SVS guidelines and predictors of change in sac size and impact of sac behavior were assessed by multivariable methods.

**Results:** 1642 EVAR patients with one year follow up were included. At 1 yr, 8% had SacIn, 72% had SacDe, and 20% had stable sac size. Independent predictors of SacIn were urgent repair (OR, 2.9; 95% CI, 1.7-5.0; $P < .01$), intraoperative type I/III endoleak (OR, 2.7; 95% CI, 1.1-6.9; $P = .03$), hypogastric coverage (OR, 2.2; 95%